

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

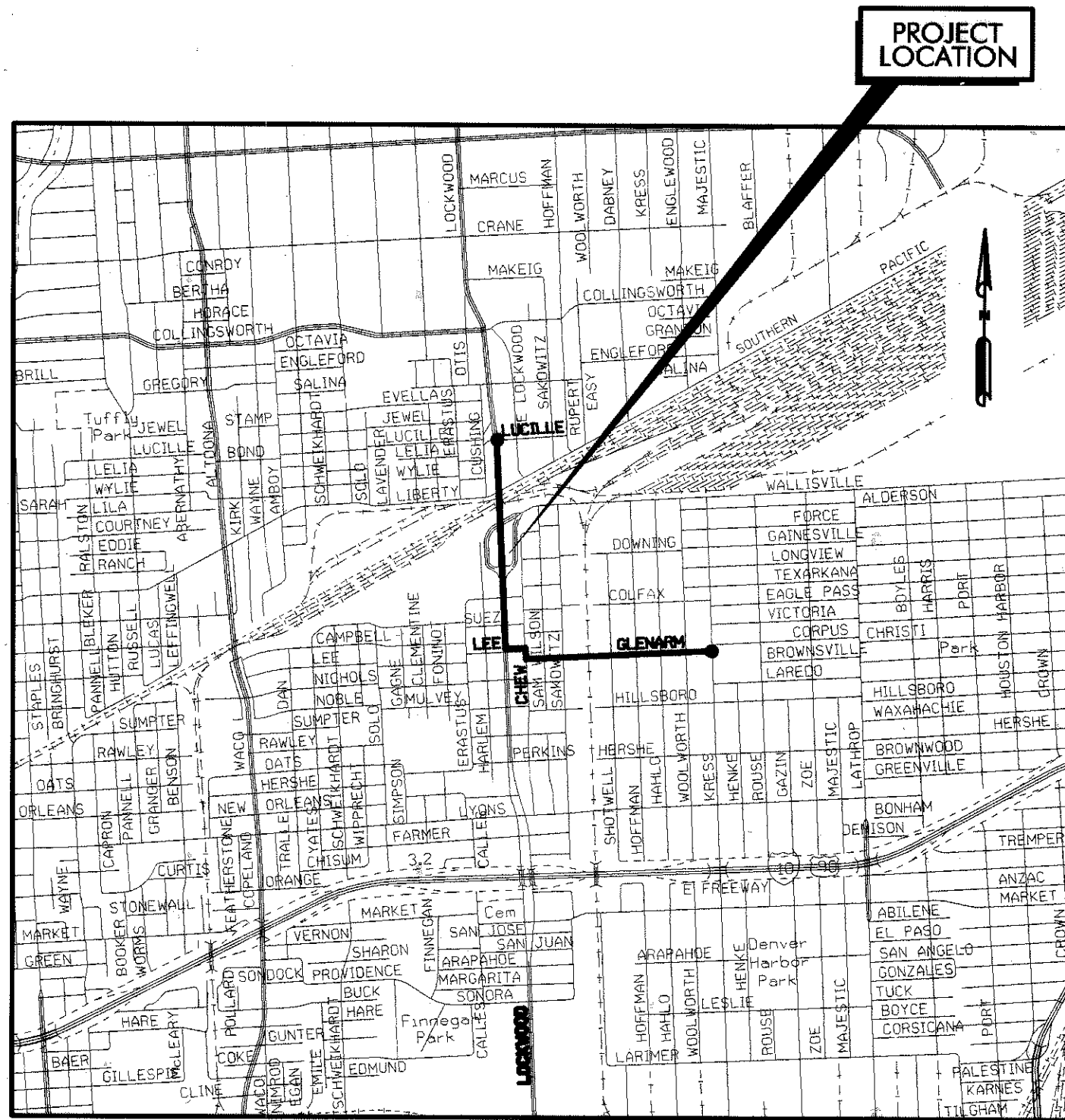
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

SURFACE WATER TRANSMISSION PROGRAM

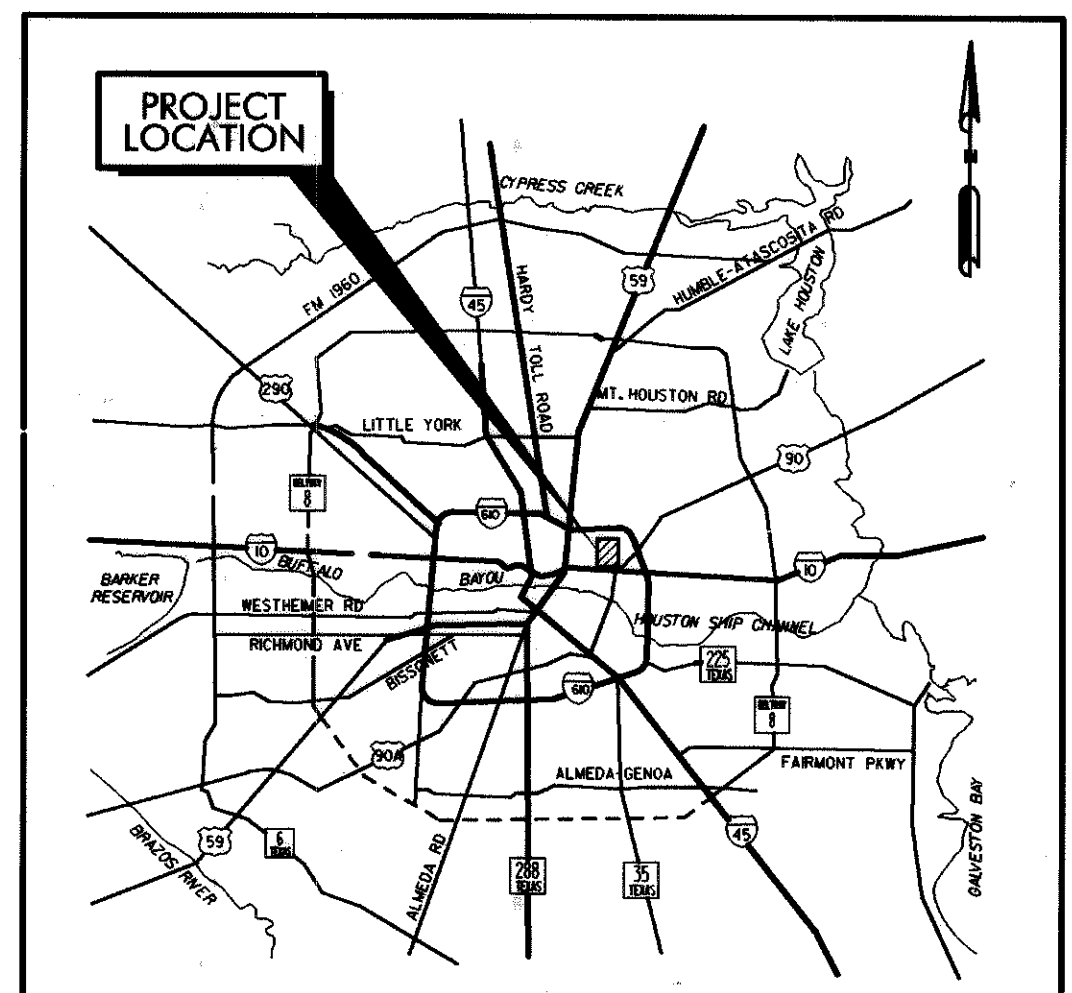
PROPOSED 84" WATER MAIN ALONG GLENARM, CHEW, LEE, AND LOCKWOOD FROM KRESS TO LUCILLE

RECORD DRAWING REVISIONS REFLECT
IN-FIELD CONDITIONS AS RECORDED
BY CONTRACTOR

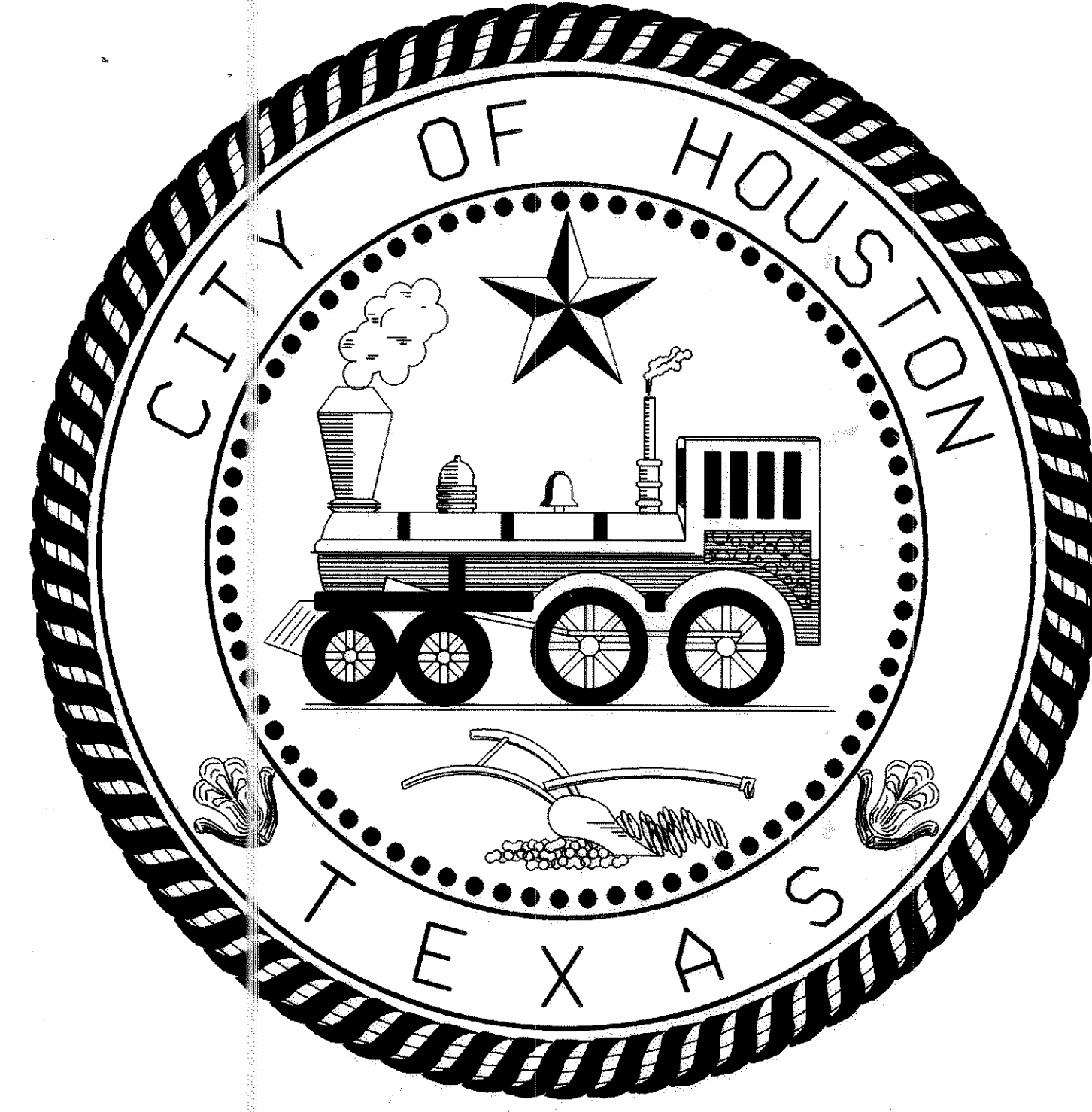
CONTRACT NO. 2B-2
GFS NO. S-0900-33-3 FILE NO. 9750-2



VICINITY MAP
NOT TO SCALE
KEY MAP NO. 494



LOCATION MAP
NOT TO SCALE
(KEY MAP No. 494)
(WATER BLOCK NO. 285-A)
(SANITARY BLOCK NO. 808-B)



MAYOR
LEE P. BROWN

CONTROLLER
SYLVIA R. GARCIA

**DISTRICT
COUNCIL MEMBERS**

- | | | |
|----------------------------------|------------------------------------|--------------------------------|
| BRUCE TATRO
DISTRICT A | MICHAEL J. YARBROUGH
DISTRICT B | MARTHA J. WONG
DISTRICT C |
| JEW DON BONEY, Jr.
DISTRICT D | ROB TODD
DISTRICT E | RAY F. DRISCOLL
DISTRICT F |
| JEAN KELLEY
DISTRICT G | FELIX FRAGA
DISTRICT H | JOHN E. CASTILLO
DISTRICT I |

**COUNCIL MEMBERS
AT-LARGE**

- | | |
|-----------------------------------|--------------------------|
| ANNISE D. PARKER
POSITION 1 | JOE ROACH
POSITION 2 |
| ORLANDO SANCHEZ
POSITION 3 | CHRIS BELL
POSITION 4 |
| CARROLL G. ROBINSON
POSITION 5 | |

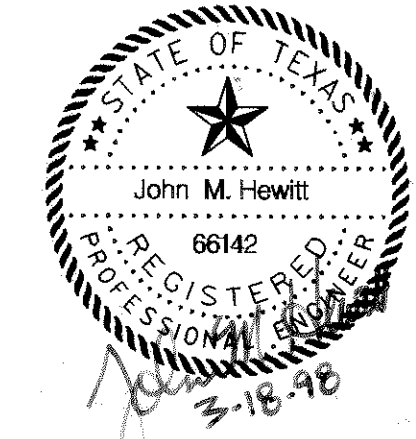
LANDTECH CONSULTANTS
2627 North Loop West
Suite 224
Houston, Texas 77008
Tel. No. (713) 861-7068

11-13-00

**APPROVED
CITY OF HOUSTON**

[Signature] 1/27/90
CITY ENGINEER DATE
RICHARD C. SCOTT, P. E.

[Signature] 1-24-90
DIRECTOR OF PUBLIC WORKS AND ENGINEERING DATE
JERRY KING, P. E.



INDEX OF DRAWINGS (2B-2)

SHEET NO.	DESCRIPTION
1.	COVER SHEET AND VICINTY MAP
2.	INDEX TO DRAWINGS AND LEGEND
3.	CONSTRUCTION NOTES
4.	SHEET LAYOUT/CORE BORING PLAN (SHEET 1 OF 2)
5.	SHEET LAYOUT/CORE BORING PLAN (SHEET 2 OF 2)
6.	BASELINE TIES AND BENCHMARKS (SHEET 1 OF 2)
7.	BASELINE TIES AND BENCHMARKS (SHEET 2 OF 2)
8.	C.O.H. MONUMENTATION BENCHMARK DATA
9.	LOCKWOOD DRIVE STA. 0+50 TO STA. 5+50 - PLAN
10.	LOCKWOOD DRIVE STA. 0+50 TO STA. 5+50 - PROFILE
11.	LOCKWOOD DRIVE STA. 5+50 TO STA. 10+00 - PLAN
12.	LOCKWOOD DRIVE STA. 5+50 TO STA. 10+00 - PROFILE
13.	LOCKWOOD DRIVE STA. 10+00 TO STA. 15+00 - PLAN
14.	LOCKWOOD DRIVE STA. 10+00 TO STA. 15+00 - PROFILE
15.	LOCKWOOD DRIVE STA. 15+00 TO STA. 20+00 - PLAN
16.	LOCKWOOD DRIVE STA. 15+00 TO STA. 20+00 - PROFILE
17.	LOCKWOOD DRIVE STA. 20+00 TO STA. 25+00 - PLAN
18.	LOCKWOOD DRIVE STA. 20+00 TO STA. 25+00 - PROFILE
19.	LOCKWOOD DRIVE STA. 25+00 TO STA. 30+00 - PLAN
20.	LOCKWOOD DRIVE STA. 25+00 TO STA. 30+00 - PROFILE
21.	LEE STREET STA. 1+00 TO STA. 3+77.10 - PLAN
22.	LEE STREET STA. 1+00 TO STA. 3+77.10 - PROFILE
23.	CHEW STREET STA. 3+77.104 TO STA. 4+83.22
24.	GLENARM STA. 2+00 TO STA. 6+50
25.	GLENARM STA. 6+50 TO STA. 11+00

SHEET NO.	DESCRIPTION
26.	GLENARM PROPOSED PAVEMENT
27.	GLENARM STA. 11+00 TO STA. 16+00
28.	GLENARM PROPOSED PAVEMENT
29.	GLENARM STA. 16+00 TO STA. 20+75
30.	GLENARM PROPOSED PAVEMENT
31.	GLENARM STA. 20+75 TO STA. 25+50
32.	GLENARM PROPOSED PAVEMENT
33.	LOCKWOOD DRIVE CROSS-SECTIONS
34.	NOT USED
35.	PRESSURE REDUCING VALVE VAULT SECTION AND DETAILS
36.	PRESSURE REDUCING VALVE VAULT DETAILS
37.	PCCP DETAILS
38.	STEEL PIPE DETAILS
39.	VALVE AND SERVICE MANHOLE DETAILS
40.	COMBINATION AIR VALVE AND DETAILS
41.	VACUUM VALVE AND VAULT DETAILS
42.	TUNNEL AND CASING DETAILS
43.	STANDARD WATER LINE DETAILS
44.	STANDARD SANITARY SEWER CONSTRUCTION DETAILS
45.	SANITARY SEWER PFECAST CONCRETE MANHOLES
46.	STANDARD DRAINAGE DETAILS
47.	STORM SEWER DETAILS - TYPE "BB" INLET
48.	EXCAVATION, BEDDING, BACKFILL AND PAVEMENT REPAIR DETAILS
49.	PAVEMENT, DRIVEWAY AND DITCH DETAILS
50.	PAVEMENT DETAILS - SHEET 1 OF 2

SHEET NO.	DESCRIPTION
51.	PAVEMENT DETAILS - SHEET 2 OF 2
52.	CATHODIC PROTECTION DETAILS FOR JOINT BONDING
53.	DETAILS FOR CATHODIC PROTECTION CABINET AND ANODE GROUND BED
54.	CATHODIC PROTECTION DETAILS FOR TUNNEL OR CASING CROSSING
55.	CATHODIC PROTECTION DETAILS FOR TEST STATIONS
56.	MISCELLANEOUS CATHODIC PROTECTION DETAILS
57.	TRAFFIC CONTROL PLAN - GENERAL NOTES AND CONSTRUCTION SEQUENCE (SHEET 1 OF 16)
58.	TRAFFIC CONTROL PLAN - DETOUR PLAN PHASE 1A (SHEET 2 OF 16)
59.	TRAFFIC CONTROL PLAN - DETOUR PLAN PHASE 1B (SHEET 3 OF 16)
60.	TRAFFIC CONTROL PLAN - DETOUR PLAN PHASE 1C, D (SHEET 4 OF 16)
61.	TRAFFIC CONTROL PLAN - PHASE II (SHEET 5 OF 16)
62.	TRAFFIC CONTROL PLAN - PHASE II (SHEET 6 OF 16)
63.	TRAFFIC CONTROL PLAN - PHASE III A, B & C (SHEET 7 OF 16)
64.	TRAFFIC CONTROL PLAN - PHASE III, STEP A (SHEET 8 OF 16)
65.	TRAFFIC CONTROL PLAN - DETOUR PLAN PHASE III (SHEET 9 OF 16)
66.	TRAFFIC CONTROL PLAN - PHASE III, STEP B (SHEET 10 OF 16)
67.	TRAFFIC CONTROL PLAN - PHASE III, STEP C (SHEET 11 OF 16)
68.	TRAFFIC CONTROL PLAN - PHASE IV (SHEET 12 OF 16)
69.	TRAFFIC CONTROL PLAN - PHASE V (SHEET 13 OF 16)
70.	TRAFFIC CONTROL PLAN - PHASE V (SHEET 14 OF 16)
71.	TRAFFIC CONTROL PLAN - PHASE VI (SHEET 15 OF 16)
72.	TRAFFIC CONTROL PLAN - PHASE VI (SHEET 16 OF 16)
73.	STANDARD PAVEMENT MARKING DETAILS
74.	CITY OF HOUSTON BARRICADE STANDARD
75.	WHEELCHAIR RAMP DETAILS

EXISTING PLAN LEGEND

	SHRUB OR BUSH		CULVERT PIPE
	TREE		BASELINE
	HEDGE		CHAIN LINK, WOOD FENCE
	SAN MANHOLE, STORM MANHOLE		GAS LINE OR PIPELINE
	CLEANOUT		S.W.B.T. LINE
	GAS METER		H.L. & P. CO. CONDUIT
	GAS VALVE		H.L. & P. CO. OVERHEAD LINES
	FIRE HYDRANT		PROPERTY LINE (R.O.W.)
	WATER METER		SAN SEWER LINE LESS THAN 30' DIA.
	WATER VALVE		SAN SEWER LINE 30' DIA & LARGER
	POWER POLE, TELEPHONE & ELEC. POLE		STM SEWER LINE LESS THAN 30' DIA.
	DOWN GUY		STM SEWER LINE 30' DIA & LARGER
	STORM "B" INLET		WATER LINE LESS THAN 30' DIA.
	STORM "B-B" INLET		WATER LINE 30' DIA & LARGER
	STORM INLET, GRATE		
	TRAFFIC SIGNAL, SIGNAL POLE		
	IRON ROD/POLE		
	WOOD POST, BRICK COLUMN, BRICK PILLAR		
	TRAFFIC, METRO, BUSINESS, STOP SIGNS		
	SWBT PEDESTAL, HISTORICAL MARKER		
	C.O.H. SURVEY MARKER, MONUMENT MARKER		
	SOIL BORING LOCATION		
	SOIL BORING & PIEZOMETER LOCATION		
	MAILBOX		
	METAL POST		
	LIGHT STANDARD		
	ELECTRICAL BOX		

EXISTING PROFILE LEGEND

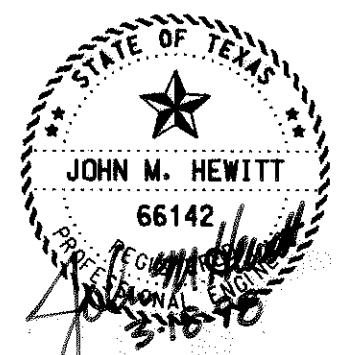
	CENTER LINE OF RIGHT-OF-WAY
	R.O.W. LINE N & E
	R.O.W. S & W
	DITCH OR CURB LINE N & E
	DITCH OR CURB LINE S & W
	SAN SEWER LINE LESS THAN 30' DIA.
	SAN SEWER LINE 30' DIA & LARGER
	WATER LINE 20' DIA & LARGER
	WATER LINE 30' DIA & LARGER
	STM SEWER LINE LESS THAN 30' DIA.
	STM SEWER LINE 30' DIA & LARGER
	S.W.B.T. CONDUIT
	GAS LINE

INFORMATION OBTAINED FROM RECORD DRAWINGS. NOT FIELD VERIFIED.

PROPOSED LEGEND

	T.S.V. & BOX
	BUTTERFLY VALVE
	STORM "BB" INLET
	ACCESS MANHOLE
	CATHODIC PROTECTION RECTIFIER AND DEEP ANODE
	AIR VENT W/ THREE BOLLARDS
	AIR VENT W/ 1 BOLLARD
	WATER LINE LESS THAN 24' DIA.
	CATHODIC PROTECTION TEST STATION
	WATER LINE 30' DIA & LARGER
	STORM SEWER LINE LESS THAN 24' DIA.
	STORM SEWER LINE 30' DIA & LARGER
	WATER LINE 30' DIA & LARGER IN TUNNEL
	SANITARY SEWER REPLACEMENT

RECORD DRAWINGS
DO NOT MODIFY
11-13-00
LOCKWOOD, ANDREWS & NEWMAN, INC.



LAN
Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd Houston, Tx 77042
A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]* Date: 3-23-98
Quality Control: *[Signature]* Date: 3-23-98

SWTP
Surface Water Transmission Program

CONTRACT 2B-2
INDEX TO DRAWINGS AND LEGEND

FILE NO. 9750-2
G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

[Signatures and Dates]
3/23/98
3/24/98
3/24/98
4/1/98

STORM SEWER ENGINEERING
MASTER WATER ENGINEERING
MANAGER WATER ENGINEERING

OTHER DEPARTMENTS

PLANNING AND DEVELOPMENT
SPONSOR DEPARTMENT

[Signature] DATE: 4/21/98
CITY ENGINEER
[Signature] DATE: 4/30/98
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

SUBMITTED: SCALE: HORIZ: 1"=20'
VERT: 1"=2'
DATE: SURVEY BY: GEORAM
DESIGNED BY: CAW
DRAWN BY: CAW
SHEET NO. 2 OF 75 SHEETS
DWG. NO. 34535
F.B. NO.:

GENERAL CONSTRUCTION

- CALL CITY OF HOUSTON TRAFFIC AND TRANSPORTATION DIVISION WHEN WORK IS SCHEDULED NEAR SIGNAL CONDUITS WITH THE CITY OF HOUSTON (HOUSTON PHONE NUMBER (713) 658-4300). CALL AT LEAST FIVE (5) WORKING DAYS IN ADVANCE.
- VERIFY LOCATIONS OF UNDERGROUND UTILITY LINES BY CONTACTING THE HOUSTON AREA UTILITY COORDINATING COMMITTEE AT 1-800-245-4545 OR (713) 233-4567 FORTY-EIGHT (48) HOURS BEFORE BEGINNING WORK.
- ADJUST MANHOLE RINGS AND LOWER AS REQUIRED FOR TEMPORARY AND NEW PAVEMENT.
- TEMPORARILY RELOCATE EXISTING UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE BY THE UTILITY. AFTER CONSTRUCTION RETURN UTILITY TO ORIGINAL LOCATION. REFER TO SPECIFICATION SECTION 01110.
- OBTAIN CITY ENGINEER'S APPROVAL TO PERMANENTLY RELOCATE EXISTING UTILITIES NOT SHOWN ON THE DRAWINGS PRIOR TO RELOCATION. CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF CITY OF HOUSTON.
- THE LOCATION OF ALL UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY. THE CITY EXPECTS THE CONTRACTOR TO PRE-LOCATE, BY WHATEVER MEANS MAY BE REQUIRED, (METAL DETECTION EQUIPMENT, PROBES, EXCAVATION, SURVEY) ALL UNDERGROUND UTILITIES BEFORE TRENCHING FOR THIS 84" WATER MAIN. ALL INVESTIGATIVE WORK WILL BE DONE AND ALL REPAIRS REQUIRED AFTER INVESTIGATION WILL BE ACCOMPLISHED BY THE CONTRACTOR. NO SEPARATE PAY ITEM. SEE SPECIFICATION SECTION 02317. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- TRENCH WIDTH FOR INSTALLATION OF 84" WATER MAIN IS SHOWN ON DETAIL 3 SHEET 48. MAXIMUM LIMITS OF PAVEMENT REPLACEMENT ARE SHOWN IN TABLE FORM ON SHEET 48. REPLACE AT CONTRACTOR'S EXPENSE ADDITIONAL PAVEMENT REMOVED OUTSIDE THE SPECIFIED TRENCH ZONES/PAVEMENT REPLACEMENT LIMITS. EXISTING UTILITIES ARE TO REMAIN IN SERVICE AT ALL TIMES.
- USE APPROPRIATE COMPACTION EQUIPMENT FOR THE TYPE OF SOIL ENCOUNTERED. CLAY BACKFILLS NORMALLY REQUIRE CONSOLIDATION BY SHEEPS FOOT ROLLER WHEREAS SAND AND GRAVEL CAN BE COMPACTED WITH VIBRATORY EQUIPMENT. CITY ENGINEER MAY REJECT SPECIFIC TYPES OF EQUIPMENT ON SITE AS SOIL CONDITIONS MAY VARY.
- TEST MATERIALS TO BE USED FOR BACKFILL AND ADJUST MOISTURE CONTENT TO SPECIFIED LEVELS BY ADDING WATER OR DRYING SOILS AS NECESSARY AND AS SPECIFIED.
- IN AREAS WHERE EXISTING LANDSCAPING REQUIRES REMOVAL DUE TO PAVEMENT IMPROVEMENTS, CONTACT RESIDENT AND OBTAIN DESIRED LOCATION TO RELOCATE WITHIN ROW. RELOCATE IN ACCORDANCE WITH SPECIFICATION SECTION 02915.
- THE UNDERSIDE OF EXISTING TREE CANOPIES MAY BE RAISED TO FACILITATE CONSTRUCTION PROVIDED: a) PROPOSED TRIMMING IS APPROVED BY CITY ENGINEER, b) WORK IS PERFORMED BY APPROVED ARBORIST, AND c) WORK IS PERFORMED IN ACCORDANCE WITH SECTION 01562 - TREE AND PLANT PROTECTION. NO TREE, EXCEPT ALONG LOCKWOOD, CAN BE REMOVED.

SURVEY AND BENCH MARK REFERENCE

- THESE PLANS AND THE SURVEYS ON WHICH THEY ARE BASED ARE TIED INTO THE OFFICIAL CITY OF HOUSTON SURVEY SYSTEM IN COMPLIANCE WITH ORDINANCE NO. 69-1978. THE CITY SURVEY MARKERS USED FOR THIS CONTRACT ARE SHOWN ON THE PLANS.
- ALL DIMENSIONS SHOWN ARE APPROXIMATE AND ARE TO BE VERIFIED BY THE CONTRACTOR. HORIZONTAL AND VERTICAL ALIGNMENT CHANGES ARE TO BE APPROVED BY THE CITY ENGINEER.
- ALL COORDINATES SHOWN ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE. ALL DISTANCES SHOWN ARE SURFACE DISTANCES.
- VERTICAL CONTROL IS SET PRIMARILY BY PK NAILS IN THE EXISTING PAVEMENT. MAINTAIN VERTICAL CONTROL THROUGHOUT THE DURATION OF THE PROJECT BY WHATEVER MEANS NECESSARY.

LIMITS OF CONSTRUCTION

- LIMIT OPERATIONS TO WITHIN THE CONFINES OF THE CONSTRUCTION WORK LIMITS SHOWN ON THE DRAWINGS. UNLESS OTHERWISE NOTED THE FOLLOWING MORE SPECIFIC TERMS APPLY AND BE ADHERED TO:
 - LIMIT EQUIPMENT, MATERIALS, STOCK PILES, ETC. TO ONE (1) CONSTRUCTION WEEK USE, ALONG THE CONSTRUCTION ROUTE.
 - WHERE THE CONSTRUCTION LIMITS ARE SHOWN ON THE DRAWINGS TO EXTEND TO THE PROPERTY LINE, KEEP EQUIPMENT, MATERIALS, STOCK PILES, ETC. A MINIMUM OF FIVE (5) FEET AWAY FROM SIDEWALKS.
 - SEE TRAFFIC CONTROL PLANS FOR FURTHER CLARIFICATION OF LIMITS OF CONSTRUCTION, ON SHEETS 57 THROUGH 72.
 - TRENCH WIDTHS FOR CONSTRUCTION OF THE 84" WATER MAIN ARE SHOWN IN THE DETAILS ON SHEET 48, EXCAVATING, BEDDING, BACKFILL AND PAVEMENT REPAIR DETAILS.
 - WHEN TUNNELING OR AUGERING IS BEING ACCOMPLISHED IN LIEU OF OPEN CUT CONSTRUCTION, ACCESS (OPEN CUT) FROM SURFACE IS DENIED. EXCEPTIONS TO THESE RESTRICTIONS ARE FOR EMERGENCY SITUATIONS WHERE ACTION IS REQUIRED TO SAFE GUARD THE WORKING PROGRESS OR OTHER EXISTING UTILITIES. IN THIS CASE, ENGINEER IS TO BE IMMEDIATELY NOTIFIED OF ANY ADDITIONAL TRAFFIC CONTROL PROCEDURES THAT WILL BE IMPLEMENTED AND ANY OTHER NECESSARY ACTIONS THAT WILL BE TAKEN UNTIL SITUATION HAS BEEN RECTIFIED.

STORM SEWER AND CULVERTS

- MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. RESTORE DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION TO SATISFACTION OF THE OWNING AUTHORITY.

WASTEWATER CONSTRUCTION NOTES

- RECORD THE LOCATIONS OF ALL STACKS, STUBS, ETC. ON "AS BUILT DRAWINGS".
- MAINTAIN SERVICE TO ALL SEWERS DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SANITARY SEWER SERVICE LATERALS AFFECTED BY CONSTRUCTION. THE CITY DOES NOT WARRANT THE LOCATION OR NUMBER OF ANY SANITARY LEADS SHOWN OR NOT SHOWN ON THE PLANS.
- WHERE DUCTILE IRON PIPE SANITARY SEWER ("D.I.P. SAN. SWR.") IS CALLED FOR ON THE DRAWINGS, THE CONTRACTOR MAY, AT HIS OPTION, PROVIDE EITHER DUCTILE IRON PIPE 150 PSI AND THICKNESS CLASS 52 OR AWWA C900/C905 OR 18 PVC PIPE WITH A PRESSURE RATING OF 150 PSI/C900 AND 235 PSI/C905.

MISCELLANEOUS

- UTILITY SERVICE LINES ARE NOT SHOWN ON THE DRAWINGS. ANTICIPATE THAT SUCH SERVICE LINES EXIST AND REPAIR THEM IF DAMAGED DURING CONSTRUCTION AT NO COST TO THE CITY.
- ADJUSTMENT OF EXISTING AND PROPOSED MANHOLE FRAMES AND COVERS ARE INCIDENTAL TO THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY PAVEMENT.
- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THERE MAY BE EXISTING LINES NOT SHOWN ON THE DRAWINGS. CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 233-4567 OR 1-800-669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE LINES LOCATED. HE ACCEPTS FULL RESPONSIBILITY FOR ANY OR ALL DAMAGES INCURRED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UTILITIES.

HOUSTON LIGHTING AND POWER (H.L.&P.)

- OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED CALL H.L.&P. AT (713)207-7777.
- HAND DIG WITHIN ONE (1) FOOT OF H.L.&P. CO. UNDERGROUND CONDUIT OR CABLE SYSTEMS.

ENTEX

- NOTIFY ENTEX AT (713) 675-7450 AFTER UNCOVERING ANY ABANDONED GAS LINES. DO NOT DISTURB GAS LINES UNTIL ENTEX HAS VERIFIED THE STATUS OF THE LINE.
- HAND DIG WITHIN ONE (1) FOOT OF ENTEX CO. UNDERGROUND GAS LINE.
- CAUTION: UNDERGROUND GAS FACILITIES LOCATION OF ENTEX MAIN LINES (TO INCLUDE UNIT GAS TRANSMISSION AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 233-4567 OR 1-800-669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

SOUTHWESTERN BELL TELEPHONE CO. (SWBT)

- REIMBURSE SWBT CO., AT THE CONTRACTOR'S EXPENSE, FOR ALL THE COSTS ASSOCIATED WITH WORK PERFORMED BY SWBT CO. FOR THE BRACING, SUPPORTING, EXPOSING AND/OR RELOCATING OF SWBT CO. UNDERGROUND CONDUIT SYSTEM AND/OR BURIED AERIAL CABLES AND POLES.
- HAND DIG WITHIN ONE (1) FOOT OF SWBT CO. UNDERGROUND CONDUIT CABLE SYSTEMS OR MANHOLES. NOTIFY SWBT OF CONSTRUCTION WITHIN FIVE (5) FEET OF SWBT MANHOLES.
- COORDINATE ANY CONFLICT WITH SWBT CO. REPRESENTATIVES AND PROVIDE NECESSARY SUPPORT FOR SWBT CO. CABLE AS INSTRUCTED BY SWBT CO. NO SEPARATE PAYMENT WILL BE MADE FOR SUCH WORK.

STREET, BRIDGE AND R.O.W.

- CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF THE JOB, SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
- EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS THAT ARE #6 BARS, 24" LONG, 24" C-C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL.
- TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
- COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING AS SPECIFIED IN CITY OF HOUSTON ORDINANCE #87-1457.
- REPLACE EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION TO CITY OF HOUSTON STANDARDS WITH LATEST ADDENDA AND AMENDMENTS THERETO.
- INSTALL WHEELCHAIR RAMPS IN ACCORDANCE WITH CITY OF HOUSTON STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.

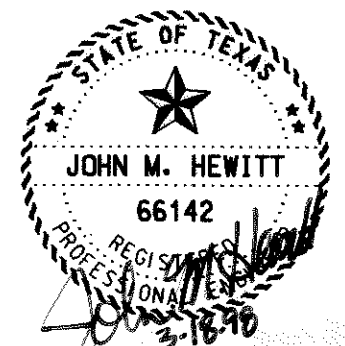
STANDARD PAVING NOTES

THE FOLLOWING NOTES OR PHRASES ARE SPECIFIC TO PAVING IMPROVEMENTS ALONG GLENARM STREET. PLAN & PROFILE SHEETS 26, 28, 30 & 32 REFERENCE THE NOTES OR PHRASES IN THE PLAN VIEW BY NOTE NUMBER AS LISTED BELOW:

- PROPOSED CONCRETE PIPE STUB WITH RING GRATE AS SHOWN ON STANDARD DRAWING - "STORM SEWER-RING GRATE FOR OPEN END OF 18" TO 72" RCP STUBS TO DITCH", AT A MINIMUM OF 0.5 FEET BELOW THE EXISTING DITCH FLOW LINE. REALIGN DITCH AS DIRECTED BY THE ENGINEER.
- PROPOSED FLEXIBLE BASE WITH 2-INCH HOT MIX ASPHALTIC CONCRETE SURFACING. FLEXIBLE BASE SHALL BE 6-INCHES OF HOT MIX ASPHALTIC CONCRETE BASE COURSE, 8-INCHES OF CRUSHED CONCRETE.
- PROPOSED STANDARD MONOLITHIC CURB AND GUTTER.
- REMOVE AND REPLACE SIDEWALK AS DIRECTED BY THE ENGINEER.
- DECREASE CURB EXPOSURE FROM 6-INCHES TO 0-INCHES IN 2 FEET.
- REMOVE EXISTING CULVERT.
- REMOVE EXISTING INLET. PLUG AND ABANDON LEAD.
- MEET EXISTING CURB OR CURB AND GUTTER FOR GRADE AND ALIGNMENT.
- PROPOSED WHEELCHAIR RAMP, AS SHOWN ON STANDARD DRAWING - "WHEELCHAIR RAMP DETAILS".
- ADJUST EXISTING MANHOLE FRAME AND COVER TO FIT NEW GRADE.
- ADJUST EXISTING WATER VALVE BOXES TO NEW PAVING GRADE. REPLACE ALL MISSING OR DAMAGED VALVE BOXES AND COVERS.

PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Pitts 3-20-98
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for One Year Only
 HOUSTON LIGHTING & POWER CO.
 Approved Only for Crossing Underground Ductlines
 Unless Noted, Valid At Time of Review Only.
 CABLE COMPANY



Lockwood, Andrews & Newnam, Inc.
 1500 CityWest Blvd
 Houston, Tx 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]* Date: 3-23-98
 Quality Control: _____ Date: _____



CONTRACT 2B-2
CONSTRUCTION NOTES

FILE NO. 9750-2
 G.F.S. NO. S-0900-33-3

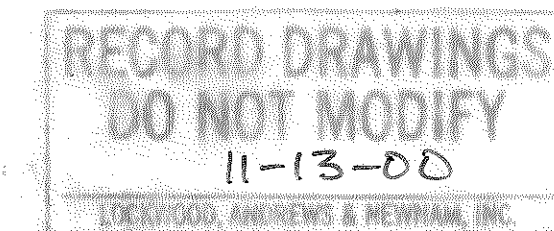
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

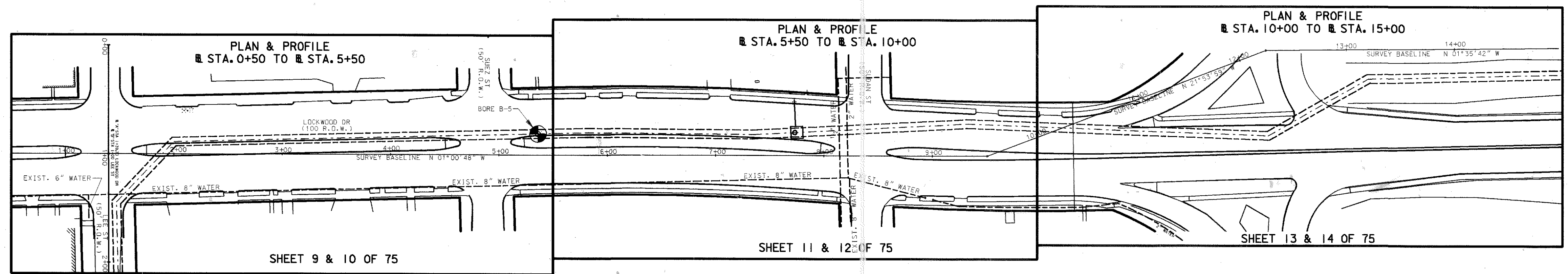
A. Hanna 3/23/98 WATER ENGINEERING
[Signature] TRAFFIC AND SIGNAL ENGINEERING
[Signature] WASTEWATER ENGINEERING
[Signature] STREET LIGHTING ENGINEERING
[Signature] STORM SEWER ENGINEERING
 MANAGER, WATER ENGINEERING

OTHER DEPARTMENTS
 PLANNING AND DEVELOPMENT
 SPONSOR DEPARTMENT

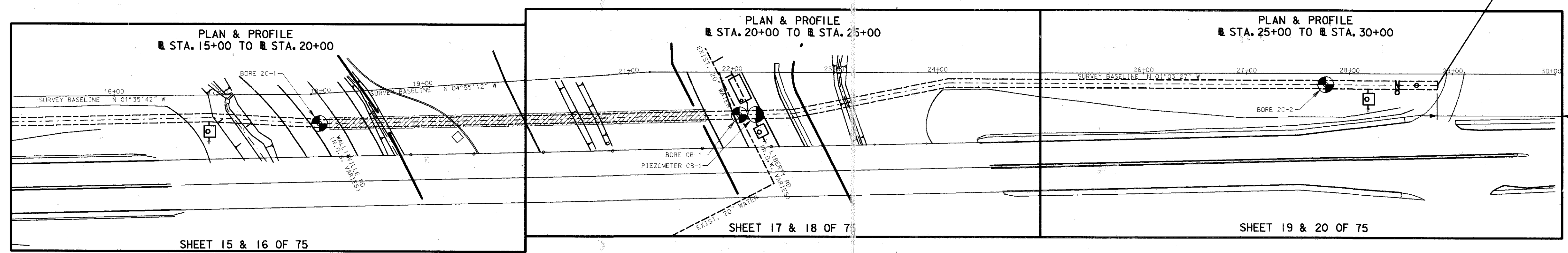
[Signature] CITY ENGINEER
 DATE: 4/27/98
[Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING
 DATE: 4/30/98

SUBMITTED: _____
 SCALE: HORIZ: 1"=20'
 VERT: 1"=2'
 DATE: _____
 SURVEY BY: GEOGRAM
 F.B. No.: _____
 DESIGNED BY: CAW
 DRAWN BY: CAW
 SHEET NO. 3 OF 75 SHEETS
 DWG. NO. 34535





LOCKWOOD DRIVE



LOCKWOOD DRIVE

LEGEND

- PROPOSED 84" WATER LINE
- ▨ PROPOSED TUNNEL CONSTRUCTION AS INDICATED
- PROPOSED ACCESS MANWAY W/ACCESS MANHOLE
- PROPOSED 84" BUTTERFLY VALVE W/ACCESS MANHOLE
- ← PROPOSED TAPPING SLEEVE & VALVE
- SOIL BORING LOCATION
- PIEZOMETER LOCATION
- PROPOSED ACCESS MANWAY 2" COMBINATION AIR RELEASE VALVE W/ACCESS MANHOLE
- PROPOSED VACUUM RELIEF VALVE VAULT
- PROPOSED PRV VAULT

NOTES:

1. THE LAYOUT SKETCH OF THE PROPOSED 84" WATER LINE IS SHOWN APPROXIMATE ONLY. THIS SHEET IS FOR GENERAL INFORMATION.
2. ALL STATIONS NOTED ARE BASELINE STATIONS.
3. FOR BORING INFORMATION, SEE "GEOTECHNICAL INVESTIGATION SURFACE WATER TRANSMISSION PROGRAM".
4. THE CITY OF HOUSTON MAKES NO EXPRESSED OR IMPLIED GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF THE GEOTECHNICAL ENGINEERING STUDIES NOR THE INTERPRETATION THEREOF.

RECORD - WINGS
DO NOT MODIFY
11-13-00

PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
N/A
SOUTHWESTERN BELL TELEPHONE CO.
Valid for One Year Only

HOUSTON LIGHTING & POWER CO.
Approved Only for Crossing Underground Ductlines
Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

STATE OF TEXAS
JOHN M. HEWITT
66142

Lockwood, Andrews & Newnam, Inc.
1500 CityWest Blvd
Houston, Tx 77042
A SUBSIDIARY OF LEQ A DALY

Approved: [Signature]
Date: 3-23-98

SWTP
Surface Water Transmission Program

CONTRACT 2B-2
SHEET LAYOUT/
CORE BORING PLAN
(SHEET 1 OF 2)

FILE NO. 9750-2
G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

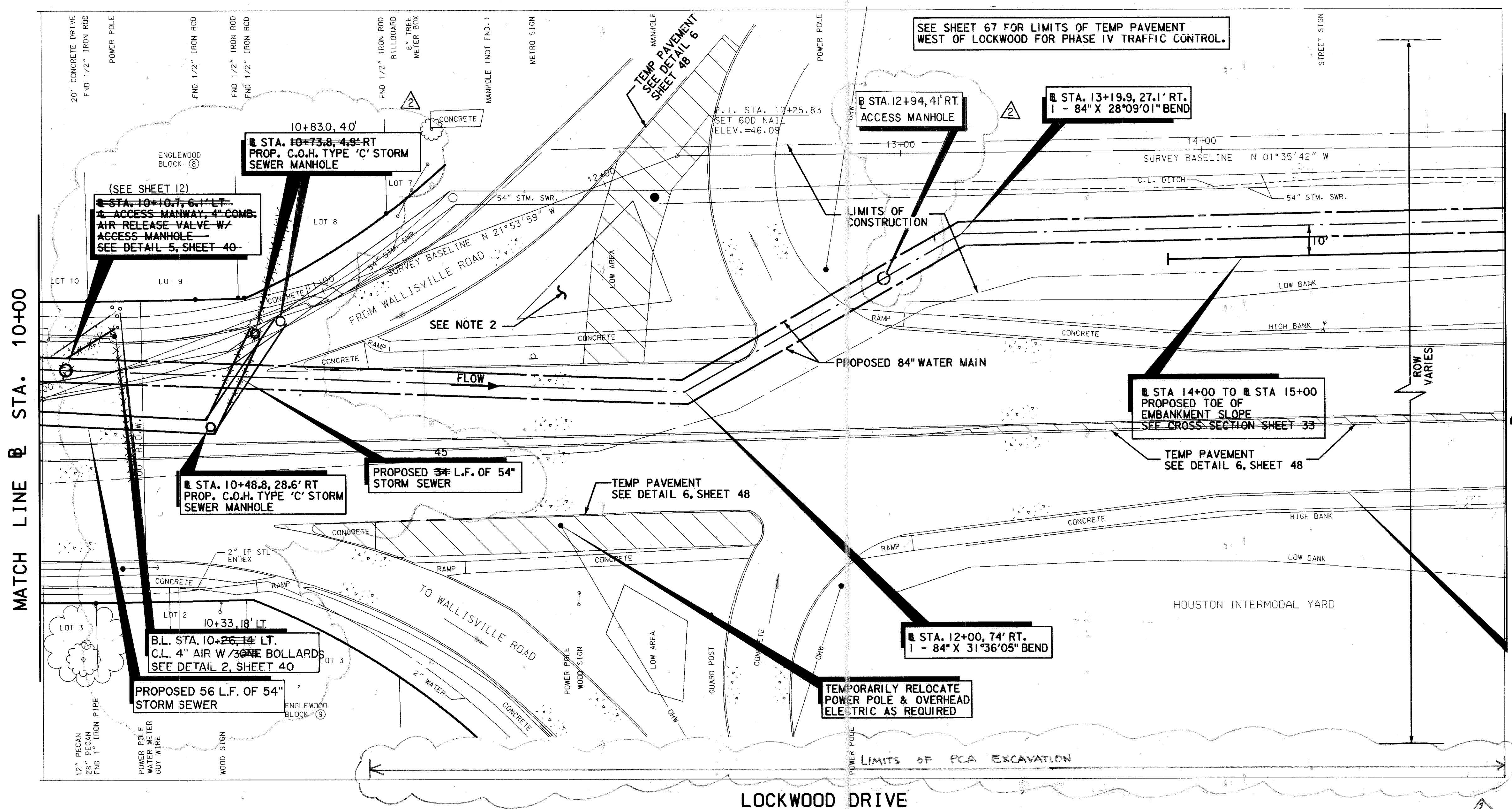
3/23/98
WATER ENGINEERING
TRAFFIC AND SIGNAL ENGINEERING
PASTERWATER ENGINEERING
STREET AND HIGHWAY ENGINEERING
STORM SEWER ENGINEERING
CONSTRUCTION
MANAGER, WATER ENGINEERING

OTHER DEPARTMENTS

PLANNING AND DEVELOPMENT SPONSOR DEPARTMENT

CITY ENGINEER DATE: 4/24/98
DIRECTOR OF PUBLIC WORKS AND ENGINEERING DATE: 4/30/98

SUBMITTED: DATE: [Blank]
SCALE: 1" = 60'
DESIGNED BY: CAN
DRAWN BY: CAN
SHEET NO. 4 OF 75 SHEETS
SURVEY BY: DATE: [Blank]
F.S. NO.:
DWG. NO. 34535



SEE SHEET 67 FOR LIMITS OF TEMP PAVEMENT WEST OF LOCKWOOD FOR PHASE IV TRAFFIC CONTROL.

STA. 12+94, 41' RT. ACCESS MANHOLE

STA. 13+19.9, 27.1' RT. 1 - 84" X 28'09"01" BEND

STA. 14+00 TO STA. 15+00 PROPOSED TOE OF EMBANKMENT SLOPE SEE CROSS SECTION SHEET 33

STA. 12+00, 74' RT. 1 - 84" X 31'36"05" BEND

TEMPORARILY RELOCATE POWER POLE & OVERHEAD ELECTRIC AS REQUIRED

BENCHMARK :
CITY OF HOUSTON SURVEY MARKER NO. 5558-0414 LOCATED AT THE INTERSECTION OF LOCKWOOD DRIVE AND INTERSTATE - 10 ON WEST SIDE OF LOCKWOOD. NGS DATUM 1973 ADJUSTMENT ELEV. = 47.77



- NOTES:**
- REMOVE EXIST 54" STORM SWR FROM STA 10+00 TO STA 10+74. USE SELECT BACKFILL MATERIAL TO FILL IN AREA PREVIOUSLY OCCUPIED BY STM SWR.
 - FILL AREA TO HIGHER ELEVATION TO PERMIT GRAVITY DRAINAGE.
 - REPLACE ALL CONCRETE ALONG LOCKWOOD DRIVE BETWEEN STA. 10+00 TO STA. 12+80 WITH HIGH EARLY STRENGTH, SEE DETAIL 7, SHEET 48.
 - STA. 11+28, BEGIN PCA EXCAVATION.

PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Pitts 3-20-98
SOUTHWESTERN BELL TELEPHONE CO.
Valid for One Year Only

HOUSTON LIGHTING & POWER CO.
Approved Only for Crossing Underground Ductlines Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

STATE OF TEXAS
RAFAEL ORTEGA
REGISTERED PROFESSIONAL ENGINEER
No. 11135
FOR REV. 2 ONLY

STATE OF TEXAS
JOHN M. HEWITT
REGISTERED PROFESSIONAL ENGINEER
No. 66142

LAN
Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd
Houston, Tx 77042
A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
Date: 3/23/98



CONTRACT 2B-2
LOCKWOOD DRIVE
STA. 10+00 TO STA. 15+00

FILE NO. 9750-2
C.F.S. NO. S-0900-33-3
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

[Signatures]
TRAFFIC AND SIGNAL ENGINEERING
STORM SEWER ENGINEERING
WASTEWATER ENGINEERING
STREET AND PUBLIC ENGINEERING
MUNICIPAL WATER ENGINEERING

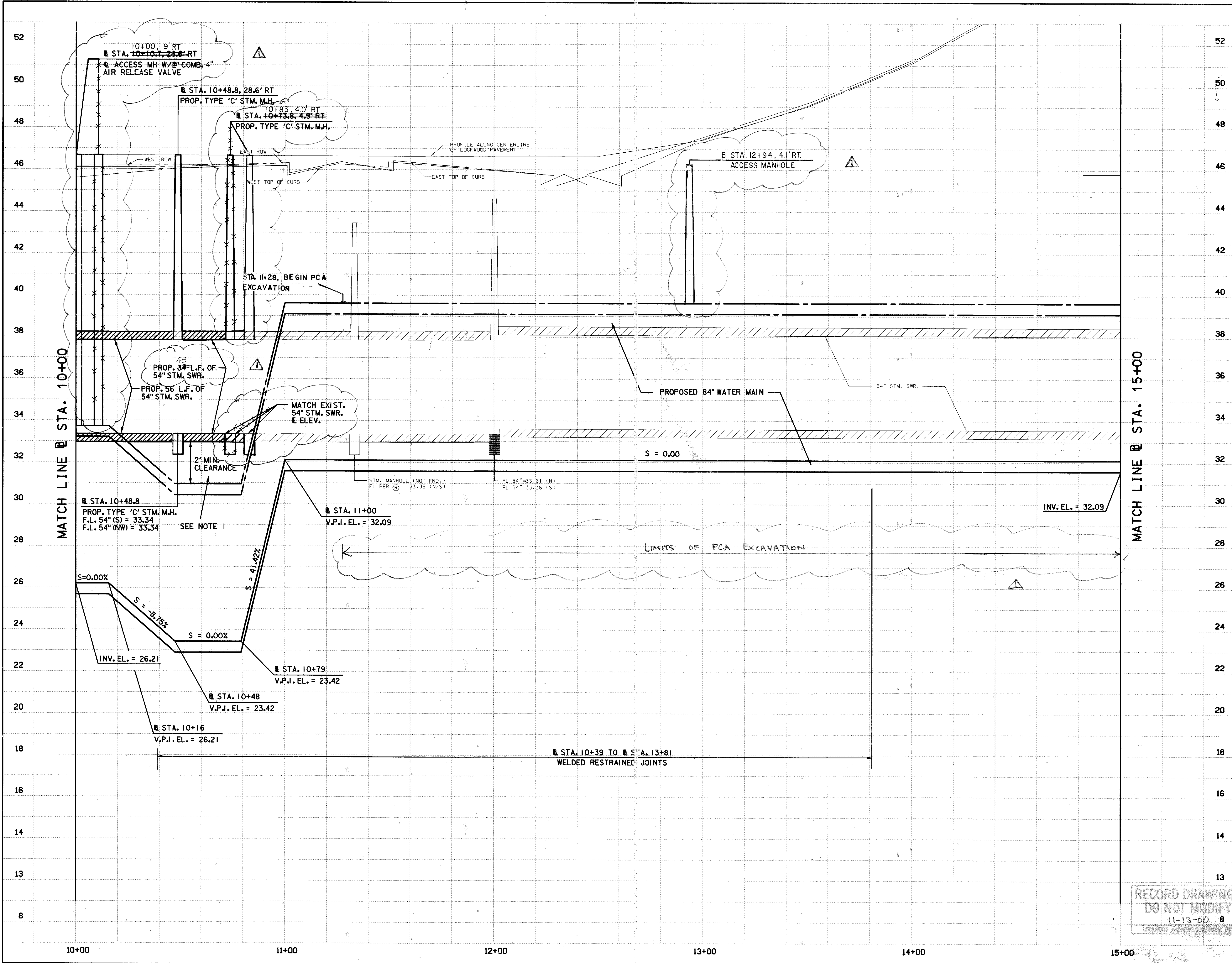
OTHER DEPARTMENTS
PLANNING AND DEVELOPMENT
SPONSOR DEPARTMENT

CITY ENGINEER: *[Signature]* DATE: 4/24/98
DIRECTOR OF PUBLIC WORKS AND ENGINEERING: *[Signature]* DATE: 4/30/98

SUBMITTED: _____
SCALE: HORIZ: 1"=20'
VERT: 1"=2'
DATE: _____
SURVEY BY: GEOGRAM
F.B. NO.: _____
DESIGNED BY: CAW
DRAWN BY: CAW
SHEET NO. 13 OF 75 SHEETS
DWG. NO. 34.535

SEE SHEET NO. 14 FOR PROFILE

RECORD DRAWINGS
DO NOT MODIFY
11-13-00



NOTES:
 1. INSTALL CEMENT STABILIZED SAND BETWEEN 54-INCH STORM SEWER & 84-INCH WATER MAIN

PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Pitts 3-20-98
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for One Year Only
 HOUSTON LIGHTING & POWER CO.
 Approved Only For Crossing Underground Ductlines
 Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

STATE OF TEXAS
 JOHN M. HEWITT
 66142
 REGISTERED PROFESSIONAL ENGINEER
 F&R REV. ONLY

LEN
 Lockwood, Andrews & Newnam, Inc.
 1500 CityWest Blvd
 Houston, Tx 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
 Date: 3/23/98

SWTP
 Surface Water Transmission Program

CONTRACT 2B-2
LOCKWOOD DRIVE
 STA. 10+00 TO STA. 15+00
 (PROFILE)
 FILE NO. 9750-2
 G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

H. Hoover 3/23/98
[Signature] 3/23/98
[Signature] 3/23/98
 WATER ENGINEERING
 TRAFFIC AND SIGNAL ENGINEERING
 SANITARY ENGINEERING
 STREET AND HIGHWAY ENGINEERING
 STORM SEWER ENGINEERING
 CONSTRUCTION
 MANAGER, WATER ENGINEERING

OTHER DEPARTMENTS

PLANNING AND DEVELOPMENT
 SPONSOR DEPARTMENT

CITY ENGINEER: *[Signature]* 4/24/98
 DATE: 4/30/98
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING: *[Signature]* 4/30/98
 DATE: 4/30/98

SUBMITTED: 11-13-00 8
 LOCKWOOD, ANDREWS & NEWMAN, INC.

DESIGNED BY: CAW
 DRAWN BY: CAW
 SHEET NO. 14 OF 75 SHEETS
 DWG. NO. 34534

RECORD DRAWINGS
 DO NOT MODIFY
 11-13-00 8
 LOCKWOOD, ANDREWS & NEWMAN, INC.

MATCH LINE @ STA. 15+00

MATCH LINE @ STA. 20+00

SEE SHEET 67 FOR LIMITS OF TEMP PAVEMENT WEST OF LOCKWOOD FOR PHASE IV TRAFFIC CONTROL.

STA. 16+92.21.8' RT. P.J. DEFLECTION ANGLE= 4°20'30" RT.

TUNNEL TEST STATION SEE DETAIL 1, SHEET 54

STA. 18+07.5, 29.6' RT. BEGIN TUNNEL

RELOCATE POWER POLE OUT OF 20' W.L. EASEMENT COORDINATE WITH HL&P

STA 15+00 TO STA 16+90 PROPOSED TOE OF EMBANKMENT SLOPE SEE CROSS SECTION SHEET 35.

B.L. STA. 17+79.5, 31.3' RT. 1-84"x6" TANGENTIAL FLANGE (TOP) 40' L.F. 6" PIPE 1-6"x90° BEND, 1-6"x45° BEND

STA. 18+02.5, 29.4' RT. P.J. DEFLECTION ANGLE= 4°20'59" LT.

STA. 17+42, 40' RT. STA. 18+15.4, 46.3' RT. 1-4" DUAL COMB. AIR RELEASE/VACUUM VALVE IN VAULT, SEE DETAIL 1, SHEET 41

STA. 18+19.2, 56.1' RT. 6" VACUUM RELIEF VENT PIPE WITH 3 BOLLARDS SEE DETAIL 1, SHEET 41

BENCHMARK : CITY OF HOUSTON SURVEY MARKER NO. 5558-0414 LOCATED AT THE INTERSECTION OF LOCKWOOD DRIVE AND INTERSTATE - 10 ON WEST SIDE OF LOCKWOOD. NGS DATUM 1973 ADJUSTMENT ELEV. = 47.77

- NOTES:
- CONTRACTOR IS TO HAVE HL&P DE-ENERGIZE OR RELOCATE OVERHEAD LINE AS REQUIRED TO CONSTRUCT TUNNEL SHAFT.
 - CONTRACTOR IS TO CONTACT UNION PACIFIC RAILROAD (1-800-336-9193) 48 HOURS BEFORE ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE (REFER. TICKET NO. 1027824)

PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
Valid for One Year Only

HOUSTON LIGHTING & POWER CO.
Approved Only for Crossing Underground Ductlines Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

STATE OF TEXAS
RAFAEL ORTEGA
REGISTERED PROFESSIONAL ENGINEER
NO. 50253

STATE OF TEXAS
JOHN M. HEWITT
REGISTERED PROFESSIONAL ENGINEER
NO. 66142

FOR REV. 1 ONLY

Lockwood, Andrews & Newnam, Inc.
1500 CityWest Blvd
Houston, Tx 77042
A SUBSIDIARY OF LEO A DALY

Approved: [Signature]
Date: 3/23/98

SWTP
Surface Water Transmission Program

CONTRACT 2B-2
LOCKWOOD DRIVE
STA. 15+00 TO STA. 20+00

FILE NO. 9750-2
G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

WATER ENGINEERING: [Signature] 3/23/98
TRAFFIC AND SIGNAL ENGINEERING: [Signature] 3/23/98
SEWER/WATER ENGINEERING: [Signature] 3/23/98
STREET AND GRADE ENGINEERING: [Signature] 3/23/98
STORM SEWER ENGINEERING: [Signature] 3/23/98
CONSTRUCTION: [Signature] 3/23/98
MANAGER, WATER ENGINEERING: [Signature]

OTHER DEPARTMENTS

PLANNING AND DEVELOPMENT: [Signature] 4/24/98
SPONSOR DEPARTMENT: [Signature] 4/24/98
CITY ENGINEER: [Signature] 4/24/98
DIRECTOR OF PUBLIC WORKS AND ENGINEERING: [Signature] 4/30/98

DESIGNED BY: CAW
DRAWN BY: CAW
SHEET NO. 15 OF 75 SHEETS
DATE: [Signature]
SURVEY BY: GEOGRAM
DWG. NO. 34535
F.B. NO.:

RECORD DRAWINGS DO NOT MODIFY 11-13-00 LOCKWOOD, ANDREWS & HEWITT, INC.

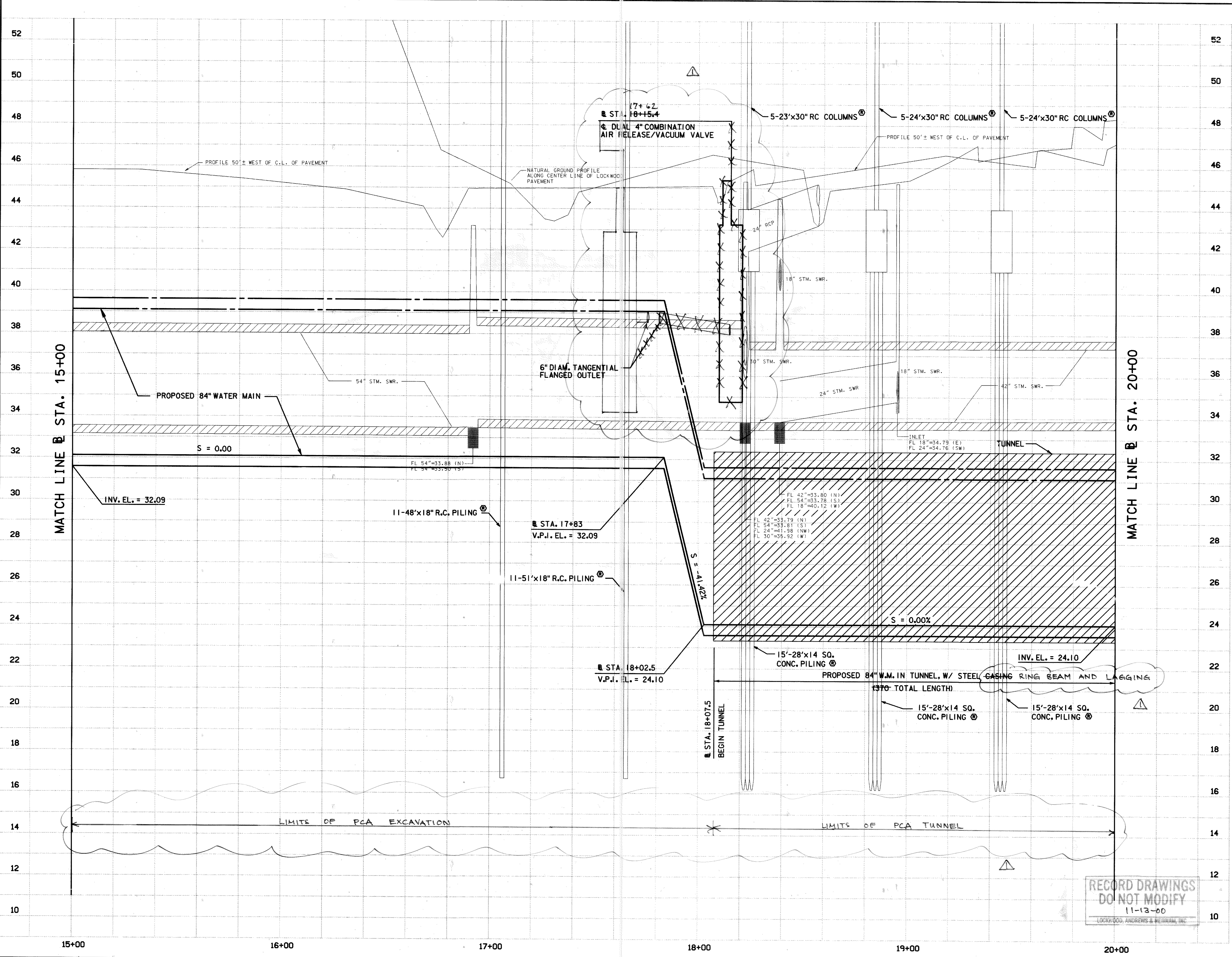
SEE SHEET NO. 16 FOR PROFILE

LOCKWOOD DRIVE

LIMITS OF PCA EXCAVATION

LIMITS OF PCA TUNNEL

NO.	DATE	REVISIONS
1		RECORD DRAWINGS



PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Bitts 3-20-98
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for One Year Only

HOUSTON LIGHTING & POWER CO.
 Approved Only for Crossing Underground Ductlines
 Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

RAFAEL ORTEGA
60253
REGISTERED PROFESSIONAL ENGINEER

JOHN M. HEWITT
66142
REGISTERED PROFESSIONAL ENGINEER

For REV. 1 ONLY

LAN
 Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd
 Houston, TX 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
 Date: 3/23/98

SWTP
 Surface Water Treatment Program

CONTRACT 2B-2
LOCKWOOD DRIVE
 STA. 15+00 TO STA. 20+00
 (PROFILE)
 FILE NO. 9750-2
 G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

<i>H. Damon</i> 3/23/98 WATER ENGINEERING	<i>[Signature]</i> TRAFFIC AND SIGNAL ENGINEERING
<i>[Signature]</i> SEWER ENGINEERING	<i>[Signature]</i> STREET LIGHTING ENGINEERING
<i>[Signature]</i> STORM SEWER ENGINEERING	<i>[Signature]</i> CONSTRUCTION
<i>[Signature]</i> MANAGER, WATER ENGINEERING	

OTHER DEPARTMENTS

PLANNING AND DEVELOPMENT SPONSOR DEPARTMENT

[Signature] CITY ENGINEER DATE: 4/24/98

[Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING DATE: 4/30/98

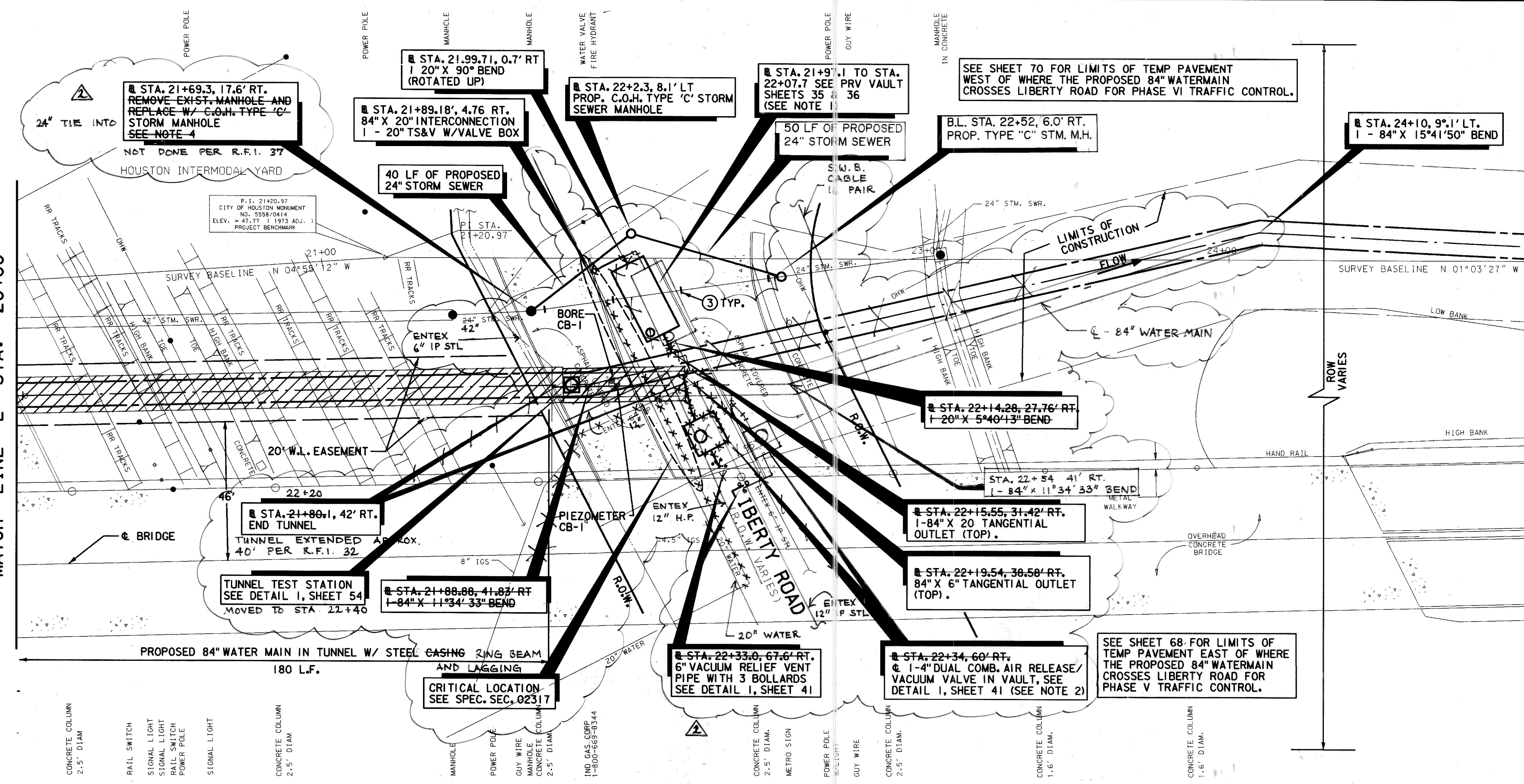
SUBMITTED: DESIGNED BY: CAW
 SCALE: HORIZ: 1"=20' DRAWN BY: CAW
 VERT: 1"=2' SHEET NO. 16 OF 75 SHEETS

DATE: SURVEY BY: GEORAM DWG. NO. 34-535
 F.R. NO.:

RECORD DRAWINGS
 DO NOT MODIFY
 11-13-00
 LOCKWOOD, ANDREWS & NEWNAM, INC.

MATCH LINE @ STA. 20+00

MATCH LINE @ STA. 25+00



BENCHMARK :
 CITY OF HOUSTON SURVEY MARKER NO. 5558-0414
 LOCATED AT THE INTERSECTION OF LOCKWOOD DRIVE
 AND INTERSTATE - 10 ON WEST SIDE OF LOCKWOOD.
 NGS DATUM 1973 ADJUSTMENT
 ELEV. = 47.77

- NOTES:**
- POSITION PRV VAULT SUCH THAT THE SOUTHWEST CORNER OF THE VAULT IS AT @ STA. 21+97.1-7.34' RT AND THE NORTHWEST CORNER OF THE VAULT IS AT @ STA. 22+07.7-1.95' RT. ADJUST LOCATION AS APPROVED BY CITY ENGINEER TO AVOID CONFLICT W/ 20" W.L.
 - POSITION AIR RELEASE/VACUUM VALVE VAULT SUCH THAT THE SOUTHWEST CORNER OF THE VAULT IS AT @ STA. 22+21.5 - 54.6' RT AND THE NORTHWEST CORNER OF THE VAULT IS AT @ STA. 22+31.3 - 49.6' RT. (THE STATION AND OFFSET CALLED OUT REFER TO THE CENTER OF THE VAULT)
 - BRICK PLUG EXIST. 24" STM. SWR. WHERE SHOWN. (4 LOCATIONS)
 - 84" X 20" INTERCONNECTION INCLUDES 20" TS & V W/VALVE BOX, STEEL WATER LINE, 20" GATE VALVE, BENDS AND APPURTENANCES.
 - REMOVE EXIST. STORM SEWR AS REQ'D.
 - CONTRACTOR IS TO CONTACT UNION PACIFIC (1-800-336-9193) 48 HOURS BEFORE ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE (REFER TICKET NO. 1027824)
 - STA 23+09, END PCA EXCAVATION.

PRIVATE UTILITY LINES SHOWN

ENTEX, INC. *W.P. Files 3-20-98*
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for one Year Only

Houston Lighting & Power Co. 2-27-98
 HOUSTON LIGHTING & POWER CO.
 Approved Only for Crossing Underground Ductlines
 Unless Noted. Valid At Time of Review Only.

CABLE COMPANY

STATE OF TEXAS
 RAFAEL ORTEGA
 60253
 REGISTERED PROFESSIONAL ENGINEER

STATE OF TEXAS
 JOHN M. HEWITT
 66142
 REGISTERED PROFESSIONAL ENGINEER

FOR REV. 2 ONLY

LAN
 Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd
 Houston, Tx 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
 Date: 3/23/98

SWTP
 Surface Water Transmission Program

CONTRACT 2B-2
LOCKWOOD DRIVE
 STA. 20+00 TO STA. 25+00

FILE NO. 9750-2
 C.F.S. NO. S-0900-33-3

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

H. Adams 3/23/98 WATER ENGINEERING
Tommy Adams 3/24/98 WATER ENGINEERING
[Signature] STORM SEWER ENGINEERING
[Signature] WORKS, WATER ENGINEERING

[Signature] TRAFFIC AND SIGNAL ENGINEERING
[Signature] STREET AND SITE ENGINEERING
 CONSTRUCTION

OTHER DEPARTMENTS
 PLANNING AND DEVELOPMENT
 SPONSOR DEPARTMENT

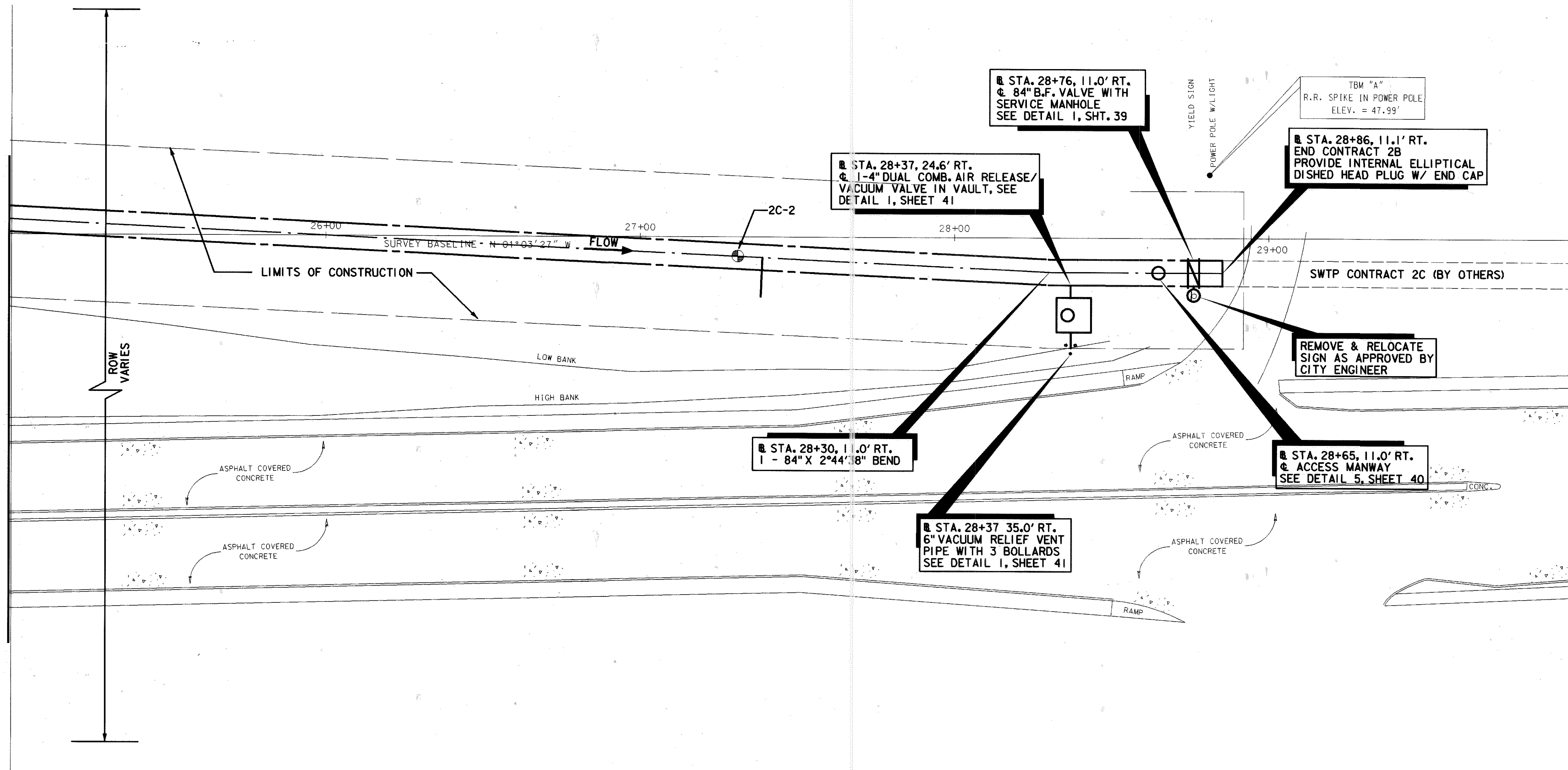
Submitted: *[Signature]* DATE: 4/24/98
 City Engineer
 Director of Public Works and Engineering DATE: 4/30/98

DESIGNED BY: CAW
 DRAWN BY: CAW
 SHEET NO. 17 OF 75 SHEETS
 DWG. NO. 84535

RECORD DRAWINGS
 DO NOT MODIFY
 11-13-00
 LOCKWOOD, ANDREWS & NEWNAM, INC.

SEE SHEET NO. 18 FOR PROFILE

MATCH LINE @ STA. 25+00



LOCKWOOD DRIVE

SEE SHEET NO. 20 FOR PROFILE

BENCHMARK :

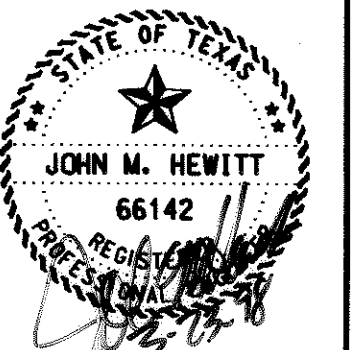
CITY OF HOUSTON SURVEY MARKER NO. 5558-0414
LOCATED AT THE INTERSECTION OF LOCKWOOD DRIVE
AND INTERSTATE - 10 ON WEST SIDE OF LOCKWOOD.
NGS DATUM 1973 ADJUSTMENT
ELEV. = 47.77



PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Pitts 3-20-98
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for One Year Only
John M. Hewitt 3-27-98
 HOUSTON LIGHTING & POWER CO.
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CABLE COMPANY



LEN
Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd
 Houston, Tx 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
 Date: 3/27/98



CONTRACT 2B-2
LOCKWOOD DRIVE
 STA. 25+00 TO STA. 30+00

FILE NO. 9750-2
 G.F.S. NO. S-0900-33-3

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

[Signatures]
 TRAFFIC AND SIGNAL ENGINEERING
 WATER ENGINEERING
 STORM SEWER ENGINEERING
 MANAGER, WATER ENGINEERING

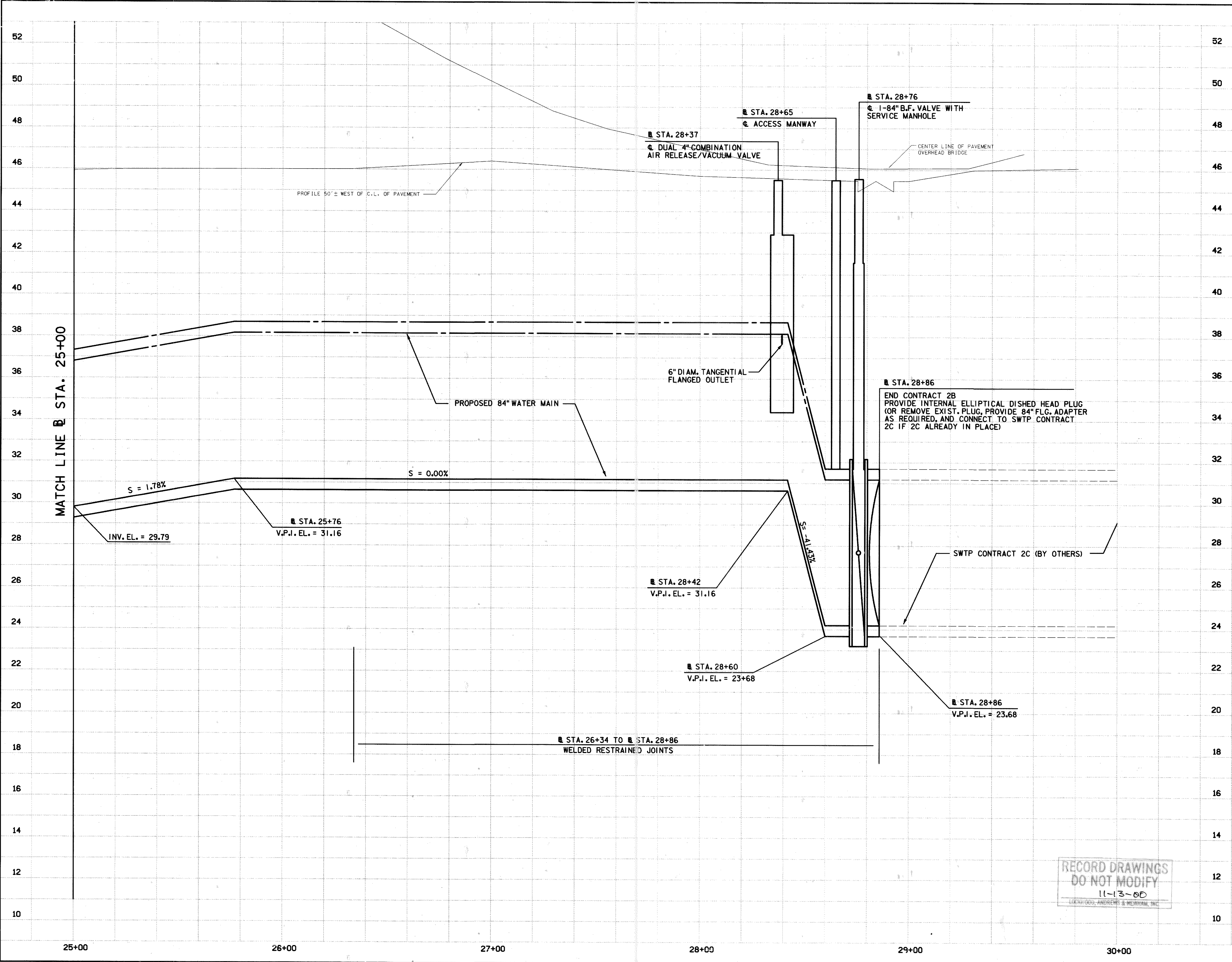
OTHER DEPARTMENTS
 PLANNING AND DEVELOPMENT
 SPONSOR DEPARTMENT

[Signature] 4/24/98
 CITY ENGINEER DATE
[Signature] 4/30/98
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING DATE

SUBMITTED:
 SCALE: HORIZ: 1"=20'
 VERT: 1"=2'
 DATE:
 SURVEY BY: GEGRAM
 F.B. NO.:

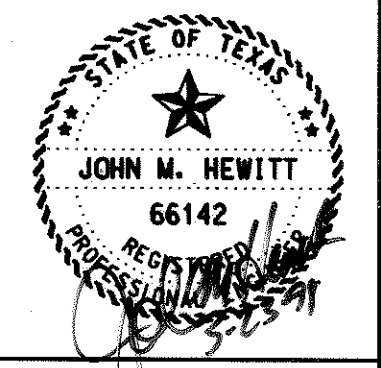
DESIGNED BY: CAW
 DRAWN BY: CAW
 SHEET NO. 19 OF 75 SHEETS
DWG. NO. 34535

RECORD DRAWINGS
 DO NOT MODIFY
 11-13-00
 LOCKWOOD, ANDREWS & NEWNAM, INC.



PRIVATE UTILITY LINES SHOWN

ENTEX, INC.
W.P. Pitts 3-20-98
 SOUTHWESTERN BELL TELEPHONE CO.
 Valid for One Year Only
John M. Hewitt 2-27-98
 HOUSTON LIGHTING & POWER CO.
 Approved Only for Crossing Underground Ductlines
 Unless Noted, Valid At Time of Review Only.
 CABLE COMPANY



LAN
 Lockwood, Andrews & Newnam, Inc. 1500 CityWest Blvd
 Houston, Tx 77042
 A SUBSIDIARY OF LEO A DALY

Approved: *[Signature]*
 Date: 3/23/98



CONTRACT 2B-2
LOCKWOOD DRIVE
 STA. 25+00 TO STA. 30+00
 (PROFILE)
 FILE NO. 9750-2
 C.F.S. NO. S-0900-33-3

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

[Signatures]
 WATER ENGINEERING
 TRAFFIC AND SIGNAL ENGINEERING
 MATERIALS ENGINEERING
 STREET AND ROAD ENGINEERING
 SYSTEMS ENGINEERING
 CONSTRUCTION
 MANAGER, WATER ENGINEERING

OTHER DEPARTMENTS
 PLANNING AND DEVELOPMENT
 SPONSOR DEPARTMENT
[Signature] 4/24/98
 CITY ENGINEER DATE
[Signature] 4/30/98
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING DATE

SUBMITTED: _____
 SCALE: HORIZ: 1"=20'
 VERT: 1"=2'
 DATE: _____
 SURVEY BY: GEOGRAM
 F.B. NO.: _____
 DESIGNED BY: CAW
 DRAWN BY: CAW
 SHEET NO. 20 OF 75 SHEETS
 DWG. NO. 34535

RECORD DRAWINGS
 DO NOT MODIFY
 11-13-00
 LOCKWOOD, ANDREWS & NEWNAM, INC.

No.	Date	Appr.